



# PATENT ABSTRACTS OF JAPAN

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(71)Applicant : SUMITOMO SITIX CORP

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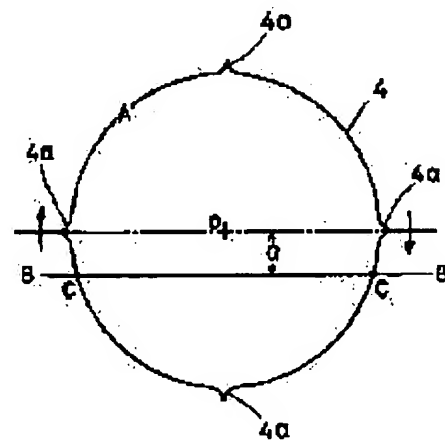
(72)Inventor : TAKANASHI KEIICHI

## (54) METHOD FOR MEASURING CRYSTALLINE DIAMETER

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To measure a crystalline diameter with high precision around the whole periphery of the crystal including crystal habit line 4a parts generating at an outer surface of a single crystal 4 at the time of pulling up the single crystal by a CZ method.

**SOLUTION:** Positions of intersection points C, C between a fusion ring A and a photometric line B are detected by an one-dimensional CCD camera. When the crystal habit line 4a of the single crystal 4 passes the photometric line B-B, positions of intersection points at both sides fluctuate. Since the photometric line B is away from a crystalline center O, timing difference  $\theta$  is generated between the position fluctuations of the intersection points at both sides. When an interval between the intersection points is obtained from position detecting data of the intersection points at both sides, the timing difference  $\theta$  is removed. Further, influence of swinging of the single crystal is removed by determining frequency components of the position detecting data of the intersection points at both sides and removing frequency components of low orders due to swinging of the single crystal.



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